### NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

# DIVISION OF HIGHWAYS GEOTECHNICAL UNIT

## SUBSURFACE INVESTIGATION

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#### SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS			
SOIL DESCRIPTION	GRADATION	ROCK DESCRIPTION	TERMS AND DEFINITIONS
SOIL IS CONSIDERED TO BE THE UNCONSOLIDATED, SEMI-CONSOLIDATED OR WEATHERED EARTH MATERIALS WHICH	WELL GRADED- INDICATES A GOOD REPRESENTATION OF PARTICLE SIZES FROM FINE TO COARSE UNIFORM- INDICATES THAT SOIL PARTICLES ARE ALL APPROXIMATELY THE SAME SIZE (ALSO POORLY GRADED).	HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT WHEN TESTED, WOULD YIELD SPT REFUSAL, AN INFERRED ROCK LINE INDICATES THE LEVEL AT WHICH NON-COASTAL PLAIN MATERIAL WOULD YIELD SPT REFUSAL.	ALLUVIUM (ALLUV.) - SOILS WHICH HAVE BEEN TRANSPORTED BY WATER.
CAN BE PENETRATED WITH A CONTINUOUS FLIGHT POWER AUGER, AND WHICH YIELDS LESS THAN 100 BLOWS PER 30 cm ACCORDING TO STANDARD PENETRATION TEST (AASHTO 1206, ASTM D-1586) SOIL CLASSIFICATION IS	GAP-GRADED- INDICATES A MIXTURE OF UNIFORM PARTICLES OF TWO OR MORE SIZES.	SPT REFUSAL IS PENETRATION BY A SPLIT SPOON SAMPLER EQUAL TO OR LESS THAN 2.5 cm PER 50 BLOWS.  IN NON-COASTAL PLAIN MATERIAL, THE TRANSITION BETWEEN SOIL AND ROCK IS OFTEN REPRESENTED BY A ZONE	AGUIFER - A WATER BEARING FORMATION OR STRATA.
BASED ON THE AASHTO SYSTEM AND BASIC DESCRIPTIONS GENERALLY SHALL INCLUDE; CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH AS MINERALOGICAL	ANGULARITY OF GRAINS	OF WEATHERED ROCK. ROCK MATERIALS ARE TYPICALLY DIVIDED AS FOLOWS:	ARENACEOUS - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND OR THAT CONTAIN SAND.
COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. EXAMPLE:  VERY STIFF, GRAY SILTY CLAY, MOST WITH INTERBEDGED FINE SAND LAYERS, HIGHLY PLASTIC, A-7-6	THE ANGULARITY OR ROUNDNESS OF SOIL GRAINS ARE DESIGNATED BY THE TERMS; ANGULAR, SUBANGULAR, SUBROUNDED, OR ROUNDED.	WEATHERED NON-COASTAL PLAIN MATERIAL THAT YIELDS SPT N VALUES > 100 BLOWS	ARGILLACEOUS - APPLIED TO ALL ROCKS OR SUBSTANCES COMPOSED OF CLAY MINERALS, OR HAVING A NOTABLE PROPORTION OF CLAY IN THEIR COMPOSITION, AS SHALE, SLATE, ETC.
SOIL LEGEND AND AASHTO CLASSIFICATION	MINERALOGICAL COMPOSITION	ROCK (WR) PER 30 cm.	ARTESIAN - GROUND WATER THAT IS UNDER SUFFICIENT PRESSURE TO RISE ABOVE THE LEVEL AT WHICH IS
CENTERAL CRANKILAR MATERIALC CULT CLAY MATERIALC	MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC. ARE USED IN DESCRIPTIONS WHENEVER	CRYSTALLINE ROCK (CR) FINE TO COARSE GRAIN IGNEOUS AND METAMORPHIC ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES GRANITE,	ENCOUNTERED, BUT WHICH DOES NOT NECESSARILY RISE TO OR ABOVE THE GROUND SURFACE.  CALCAREOUS (CALC.) - SOILS WHICH CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE.
CLASS. (\$5% PASSING #200) (\$5% PASSING *200) UNGANIC MATERIALS	THEY ARE CONSIDERED OF SIGNIFICANCE.	GNEISS, GABBRO, SCHIST, ETC.  GNEISS, GABBRO, SCHIST, ETC.  FINE TO COARSE GRAIN METAMORPHIC AND NON-COASTAL PLAIN	COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM OF SLOPE.
GROUP A-1 A-3 A-2 A-4 A-5 A-6 A-7 A-1, A-2 A-4, A-5 CLASS. A-1-6 A-1-6 A-2-4 A-2-5 A-2-6 A-2-7 A-2-6 A-2-7 A-2-6 A-3-6 A-7 A-1-6 A-3-6 A-7 A-1-6 A-3-6 A-7 A-1-6 A-3-6 A-7 A-1-6 A-3-6 A-7 A-3-6 A-3 A-6 A-7 A-1-6 A-3-6 A-3 A-6 A-7 A-1-6 A-3-6 A-3 A-6 A-7 A-1-6 A-3-6 A-7 A-1-6 A-3-6 A-3 A-6 A-7 A-1-6 A-3-6 A-3-6 A-3 A-6 A-7 A-1	COMPRESSIBILITY	NON-CRITICINE SEDIMENTARY ROCK THAT WOULD YEILD SPT REFUSAL IF TESTED, ROCK TYPE	CORE RECOVERY (REC.) - TOTAL LENGTH OF ALL MATERIAL RECOVERED IN THE CORE BARREL DIVIDED BY TOTAL
CLASS.   A-1-a   A-1-b     A-2-4   A-2-5   A-2-7	SLIGHTLY COMPRESSIBLE LIQUID LIMIT LESS THAN 30 MODERATELY COMPRESSIBLE LIQUID LIMIT 31-50	COASTAL PLAIN COASTAL PLAIN SEDIMENTS CEMENTED INTO ROCK, BUT MAY NOT YIELD	LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE.  DIKE - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT ROCKS OR CUTS
688888888888888888888888888888888888888	HIGHLY COMPRESSIBLE LIQUID LIMIT GREATER THAN 50  PERCENTAGE OF MATERIAL	SEDIMENTARY SPT REFUSAL. ROCK TYPE INCLUDES LIMESTONE, SANDSTONE, CEMENTED SHELL BEDS, ETC.	MASSIVE ROCK.
7. PASSING STATE SILT-GRANULAR CLAY MUCK,	GRANULAR SILT- CLAY	WEATHERING	DIP - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE HORIZONTAL.
# 40 30 MX50 MX51 MN   SOILS   PEAT   PEAT	ORGANIC MATERIAL SOILS SOILS OTHER MATERIAL  TRACE OF ORGANIC MATTER 2 - 3% 3 - 5% TRACE 1 - 10%	FRESH ROCK FRESH, CRYSTALS BRIGHT, FEW JOINTS MAY SHOW SLIGHT STAINING, ROCK RINGS UNDER	DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE LINE OF DIP, MEASURED CLOCKWISE FROM NORTH.
	LITTLE ORGANIC MATTER 3 - 5% 5 - 12% LITTLE 10 - 20%	HAMMER IF CRYSTALLINE.	FAULT - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE SIDES
PLASTIC INDEX 6 MX N.P. 10 MX 10 MX 11 MN 11 MN 10 MX 10 MX 11 MN 11 MN 11 MN 11 MN	MODERATELY ORGANIC	VERY SLIGHT ROCK GENERALLY FRESH, JOINTS STAINED, SOME JOINTS MAY SHOW THIN CLAY COATINGS IF OPEN, (V. SLI.) CRYSTALS ON A BROKEN SPECIMEN FACE SHINE BRIGHTLY. ROCK RINGS UNDER HAMMER BLOWS IF	RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE.  FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES.
GROUP INDEX 0 0 0 4 MX 8 MX 12 MX 16 MX No MX MODERATE ORGANIC	GROUND WATER	OF A CRYSTALLINE NATURE.	FLOAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLODGED FROM PARENT MATERIAL
USUAL TYPES STONE FRAGS. FINE SILTY OR CLAYEY SILTY CLAYEY ORGANIC SOILS	✓ WATER LEVEL IN BORE HOLE IMMEDIATELY AFTER DRILLING.	SLIGHT ROCK GENERALLY FRESH, JOINTS STAINED AND DISCOLORATION EXTENDS INTO ROCK UP TO 2.5 cm. OPEN JOINTS MAY CONTAIN CLAY. IN GRANITOID ROCKS SOME OCCASIONAL FELDSPAR	FLOOD PLAIN (F.P.) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM.
OF MAJOR GRAVEL AND SAND GRAVEL AND SAND SOILS SOILS MATTER	STATIC WATER LEVEL AFTER 24 HOURS.	CRYSTALS ARE DULL AND DISCOLORED. CRYSTALLINE ROCKS RING UNDER HAMMER BLOWS.	FORMATION (FM.) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE FIELD.
GEN. RATING	→ PW PERCHED WATER, SATURATED ZONE OR WATER BEARING STRATA	MODERATE SIGNIFICANT PORTIONS OF ROCK SHOW DISCOLORATION AND WEATHERING EFFECTS. IN GRANITOID ROCKS, MOST FELDSPARS ARE DULL AND DISCOLORED, SOME SHOW CLAY. ROCK HAS	JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED.
AS A EXCELLENT TO GOOD FAIR TO POOR POOR UNSUITABLE SUBGRADE		DULL SOUND UNDER HAMMER BLOWS AND SHOWS SIGNIFICANT LOSS OF STRENGTH AS COMPARED WITH FRESH ROCK.	LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO ITS LATERAL EXTENT.
P.I. OF A-7-5 ≤ L.L 30 : P.I. OF A-7-6 > L.L 30	SPRING OR SEEPAGE	MODERATELY ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. IN GRANITOID ROCKS, ALL FELDSPARS DULL	LENS - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS.
CONSISTENCY OR DENSENESS  RANGE OF STANDARD RANGE OF UNCONFINED	MISCELLANEOUS SYMBOLS	SEVERE AND DISCOLORED AND A MAJORITY SHOW KAOLINIZATION, ROCK SHOWS SEVERE LOSS OF STRENGTH  (MOD. SEV.) AND CAN BE EXCAVATED WITH A GEOLOGIST'S PICK, ROCK GIVES "CLUNK" SOUND WHEN STRUCK,	MOTTLED (MOT.) - IRREGULARLY MARKED WITH SPOTS OF DIFFERENT COLORS. MOTTLING IN SOILS USUALLY
PRIMARY SOIL TYPE COMPACTIONS OR PENETRATION RESISTENCE COMPRESSIVE STRENGTH	ROADWAY EMBANKMENT SPIT CPT  WITH SOIL DESCRIPTION  WITH SOIL DESCRI	AND CAN BE EXCAVALED WITH A DEGLEGIST'S PICK. ROCK GIVES "CLUNK" SOUND WHEN STRUCK.  IF TESTED, WOULD YIELD SPT REFUSAL	INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE.
VEDV 1 00CE	DESIGNATIONS	SEVERE ALL ROCKS EXCEPT QUARTZ DISCOLORED OR STAINED, ROCK FABRIC CLEAR AND EVIDENT BUT REDUCED	PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM.
GENERALLY LOOSE 4 TO 10	SOIL SYMBOL AUGER BORING S- BULK SAMPLE	(SEV.)  IN STRENGTH TO STRONG SOIL. IN GRANITOID ROCKS ALL FELDSPARS ARE KAOLINIZED TO SOME EXTENT. SOME FRAGMENTS OF STRONG ROCK USUALLY REMAIN.	RESIDUAL SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK.
MATERIAL MEDIUM DENSE 10 TO 30	ARTIFICIAL FILL OTHER THAN CORE BORING SS- SPLIT SPOON SAMPLE	IF TESTED, YIELDS SPT N VALUES > 100 BLOWS PER 30 cm.	ROCK QUALITY DESIGNATION (R.Q.D.) - A MEASURE OF ROCK QUALITY DESCRIBED BY: TOTAL LENGTH OF
(NON-COHESIVE) UENSE 30 10 50 VERY DENSE >50	SHIFTEE CT., SHELDY TURE	VERY SEVERE ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC ELEMENTS ARE DISCERNIBLE BUT  (V, SEV.)  THE MASS IS EFFECTIVELY REDUCED TO SOIL STATUS, WITH ONLY FRAGMENTS OF STRONG ROCK REMAININ	ROCK SEGMENTS EQUAL TO OR GREATER THAN 10 CENTIMETERS DIVIDED BY THE TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE.
VERY SOFT <2 (25  GENERALLY SOFT 2 TO 4 25 TO 50	MONITORING WELL SAMPLE	SAPROLITE IS AN EXAMPLE OF ROCK WEATHERED TO A DEGREE SUCH THAT ONLY MINOR VESTIGES OF THE	SAPROLITE (SAP.) - RESIDUAL SOIL WHICH RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK.
SILT-CLAY MEDIUM STIFF 4 TO 8 50 TO 100	INFERRED ROCK LINE  PIEZOMETER  PIEZOMETER  RS- ROCK SAMPLE	ORIGINAL ROCK FABRIC REMAIN. <u>IF TESTED, YJELOS SPT N VALUES &lt; 100 BLOWS PER 30 cm.</u> COMPLETE ROCK REDUCED TO SOIL. ROCK FABRIC NOT DISCERNIBLE, OR DISCERNIBLE ONLY IN SMALL AND	SILL - AN INTRUSIVE BODY OF IGNEOUS ROCK OF APPROXIMATELY UNIFORM THICKNESS AND RELATIVELY THIN
MATERIAL STIFF 8 TO 15 100 TO 200 (COHESIVE) VERY STIFF 15 TO 30 200 TO 400	TTTTT ALLUVIAL SOIL BOUNDARY INSTALLATION RT- RECOMPACTED	SCATTERED CONCENTRATIONS, QUARTZ MAY BE PRESENT AS DIKES OR STRINGERS, SAPROLITE IS	COMPARED WITH ITS LATERAL EXTENT, WHICH HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS.
HARD >30 >400	25/025 DIP/DIP DIRECTION OF INSTALLATION CRR - CRR SAMPLE	ALSO AN EXAMPLE.	SLICKENSIDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR
TEXTURE OR GRAIN SIZE	ROCK STRUCTURES  — SPT N-VALUE	ROCK HARDNESS	SLIP PLANE.  STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT) - NUMBER OF BLOWS (N) OF A 63.5 kg HAMMER
U.S. STD. SIEVE SIZE 4 10 40 60 200 270	SOUNDING ROD     REF — SPT REFUSAL	VERY HARD  CANNOT BE SCRATCHED BY KNIFE OR SHARP PICK. BREAKING OF HAND SPECIMENS REQUIRES  SEVERAL HARD BLOWS OF THE GEOLOGISTS PICK.	FALLING 0.76 METERS REQUIRED TO PRODUCE A PENETRATION OF 30 cm INTO SOIL WITH
OPENING (MM) 4.76 2.0 0.42 0.25 0.075 0.053	ABBREVIATIONS	HARD CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY, HARD HAMMER BLOWS REQUIRED	A 5 cm OUTSIDE DIAMETER SPLIT SPOON SAMPLER. SPT REFUSAL IS LESS THAN 2.5 cm PENETRATION WITH 50 BLOWS.
BOULDER COBBLE GRAVEL COARSE FINE SILT CLAY		TO DETACH HAND SPECIMEN.	STRATA CORE RECOVERY (SREC.) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY TOTAL LENGTH
(BLDR.) (CUB.) (GR.) (CSE. SD.) (F. SD.) (SL.) (CL.)	AR - AUGER REFUSAL FRAC FRACTURED SL SILT, SILTY	MODERATELY CAN BE SCRATCHED BY KNIFE OR PICK, GOUGES OR GROOVES TO 6 mm DEEP CAN BE HARD EXCAVATED BY HARD BLOW OF A GEOLOGISTS PICK, HAND SPECIMENS CAN BE DETACHED	OF STRATUM AND EXPRESSED AS A PERCENTAGE.  STRATA ROCK QUALITY DESIGNATION (S.R.O.D.) - A MEASURE OF ROCK QUALITY DESCRIBED BY:
GRAIN MM 305 75 2.0 0.25 0.05 0.005 SIZE IN 12* 3*	BT - BORING TERMINATED FRAGS FRAGMENTS SLI SLIGHTLY CL CLAY HI HIGHLY TCR - TRICONE REFUSAL	BY MODERATE BLOWS.	TOTAL LENGTH OF ROCK SEGMENTS WITHIN A STRATUM EQUAL TO OR GREATER THAN 10 CENTIMETERS DIVIDED
SOIL MOISTURE - CORRELATION OF TERMS	CPT - CONE PENETRATION TEST MED MEDIUM W - MOISTURE CONTENT	MEDIUM CAN BE GROOVED OR GOUGED I mm DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT.  HARD CAN BE EXCAVATED IN SMALL CHIPS TO PIECES 25 mm MAXIMUM SIZE BY HARD BLOWS OF THE	BY THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE.  TOPSOIL (T.S.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.
SOIL MOISTURE SCALE FIELD MOISTURE CHIEF FOR EIGHT MOISTURE DESCRIPTION	CSE COARSE MICA MICACEOUS V VERY DMT - DILATOMETER TEST MOD MODERATELY VST - VANE SHEAR TEST	POINT OF A GEOLOGISTS PICK.  SOFT CAN BE GROVED OR GOUGED READILY BY KNIFE OR PICK, CAN BE EXCAVATED IN FRAGMENTS	Source State
(ATTERBERG LIMITS) DESCRIPTION	DPT - DYNAMIC PENETRATION TEST NP - NON PLASTIC	FROM CHIPS TO SEVERAL CENTIMETERS IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN	BENCH MARK: BL-58
- SATURATEO - USUALLY LIQUID: VERY WET, USUALLY (SAT.) FROM BELOW THE GROUND WATER TABLE	e - VOID RATIO PMT - PRESSUREMETER TEST $\gamma_{ m d}$ - DRY UNIT WEIGHT F FINE SAP SAPROLITIC	PIECES CAN BE BROKEN BY FINGER PRESSURE.  VERY  CAN BE CARVED WITH KNIFE. CAN BE EXCAVATED READILY WITH POINT OF PICK, PIECES 25 mm	BL43+46.567 = -BY65+99.072 ELEVATION: 253,736
LL_ LIQUID LIMIT	FOSS FOSSILIFEROUS SD SAND, SANDY	SOFT OR MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE, CAN BE SCRATCHED READILY BY	
PLASTIC   SEMISOLID; REQUIRES DRYING TO   SEMISOLID; REQUIRES	EQUIPMENT USED ON SUBJECT PROJECT	FINGERNAIL. FRACTURE SPACING BEDDING	NOTES:
(PI) PL PLASTIC LIMIT ATTAIN OPTIMUM MOISTURE		FRACTURE SPACING BEDDING  TERM SPACING TERM THICKNESS	-
MOTOR AND COLUDE AT OR MEAR ORTHUM MOTORTING	DRILL UNITS: ADVANCING TOOLS: HAMMER TYPE:	VERY WIDE MORE THAN 3 m VERY THICKLY BEDDED > 1 m	
OM OPTIMUM MOISTURE - MOIST - (M) SOLID; AT OR NEAR OPTIMUM MOISTURE  SL SHRINKAGE LIMIT	MOBILE B- CLAY BITS	WIDE	
REQUIRES ADDITIONAL WATER TO	152 mm CONTINUOUS FLIGHT AUGER   CORE SIZE:	CLOSE 5 TO 30 cm VERY THINLY BEDDED 10 - 50 mm	
- DRY - (D) ATTAIN OPTIMUM MOISTURE	BK-51	VERT CLUSE LESS THAN 5 CM THINLY LAMINATED ( 2.5 mm	
PLASTICITY	CME-45C HARD FACED FINGER BITS	INDURATION	
PLASTICITY INDEX (PI) DRY STRENGTH	TUNGCARBIDE INSERTS	FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF THE MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC.	
NONPLASTIC   0-5   VERY LOW	X CME-550	FRIABLE RUBBING WITH FINGER FREES NUMEROUS GRAINS; GENTLE BLOW BY HAMMER DISINTEGRATES SAMPLE,	
MED. PLASTICITY 16-25 MEDIUM	PORTABLE HOIST X TRICONE 74.61 mm STEEL TEETH POST HOLE DIGGER	MODERATELY INDURATED GRAINS CAN BE SEPARATED FROM SAMPLE WITH STEEL PROBE;	
25 51 1512	X TRICONS 74.61 TIMO CORR HAND ALIGER	BREAKS EASILY WHEN HIT WITH HAMMER.	
COLOR	OTHER CORE BIT SOUNDING ROD	INDURATED GRAINS ARE DIFFICULT TO SEPARATE WITH STEEL PROBE;	
DESCRIPTIONS MAY INCLUDE COLOR OR COLOR COMBINATIONS (TAN, RED, YEL-BRN, BLUE-GRAY) MODIFIERS SUCH AS LIGHT, DARK, STREAKED, ETC. ARE USED TO DESCRIBE APPEARANCE.	OTHER VANE SHEAR TEST	DIFFICULT TO BREAK WITH HAMMER.	,
1000 1000 0000 BO ETOTT, DRINK, STILLHALD, ETC. MAC USED TO DESCRIBE METCHANING.	OTHER	EXTREMELY INDURATED SHARP HAMMER BLOWS REQUIRED TO BREAK SAMPLE; SAMPLE BREAKS ACROSS GRAINS.	·
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